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EXAMINER	
CHORBAJI, MONZER R	
ART UNIT	PAPER NUMBER
1744	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/613,475	PERKINS, MICHAEL	
	Examiner	Art Unit	
	MONZER R. CHORBAJI	1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 February 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13 and 15-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13 and 15-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This final action is in response to the amendment received on 02/22/2007

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coate et al (U.S.P.N. 5,679,257).

Regarding claim 1, Coate discloses a method for disinfecting bodies of wastewater that includes controlling the pH level of the aqueous system to a specific value (for example, see col.14, lines 43-45) then adding the chemical disinfectant to the system (col.14, lines 45-50). Coates recognizes the relationship between the proper pH value and the optimum removal of contaminants in wastewater (col.4, lines 15-25). Coate teaches that it is known in the art of food processing and wine that sulfur dioxide is used as a disinfecting agent (col.1, lines 66-67 and col.2, lines 1-6), however, such a

disinfectant has been used on small scale since large amounts are needed to reach the appropriate level of disinfection. See MPEP 2112 regarding the benefit of increasing the efficiency of the chemical disinfectant by controlling the pH level. In addition, note that both the instant claims and Coate have the same pH range value (col.4, lines 20-22). Therefore, it would have been obvious to one of ordinary skill in the at the time the invention was made to disinfect wastewater generated by food processing plants by using Coate's method since the main known chemical disinfectant in the food industry has failed to achieve wide-spread use (col.1, lines 66-67 and col.2, lines 1-6).

Regarding claims 2-3, Coate teaches controlling the pH to a value of 6 (col.4, lines 20-25) and in col.18, lines 55-65, Coates teaches that pH values depends on the type of contaminate treated. Some contaminates are better removed at higher pH while others at lower pH values. Based on this teaching, one skilled in the art would recognize that pH values are specific to the optimal removal of a certain type of contaminate and finding the proper pH is a matter of routine experimentation.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coate et al (U.S.P.N. 5,679,257) as applied to claim 1 and further in view of Hurst (U.S.P.N. 5,053,140).

Coate fails to teach using chlorine to chemically disinfect water systems in poultry plants. Hurst teaches adding chlorine to such water (col.7, lines 7-10). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Coate method by adding a chemical disinfecting wastewater step generated by poultry processing plants in order to greatly reduce the volume of

makeup fresh water to the process as taught by Hurst (col.2, lines 30-34) and further by adding chlorine as taught by Hurst as an additional chemically disinfecting step is available depending on the contamination level of wastewater (col.4, lines 40-43).

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holzhauer et al (U.S.P.N. 5,472,619) in view of Coate et al (U.S.P.N. 5,679,257) and further in view of Caracciolo (U.S.P.N. 4,827,727).

Holzhauer teaches a method for chemically disinfecting (for example, peracetic acid is a disinfectant utilized in the composition cited in col.6, lines 60-67) wastewater generated by meatpacking plants (col.1, lines 5-10) that includes controlling the pH of the wastewater (col.4, lines 34-36) and treating wastewater from various operations in the plant (col.5, lines 19-21). Holzhauer further employ pH control as a chemical treatment method and depending on its intended use, pH range values vary (col.4, lines 34-41), yet from an exemplary point of view, Holzhauer adjusts pH to 8. Holzhauer fails to teach a pH range value of about 6.5 to about 7 and treating the chilling wastewater of a poultry plant. Coate teaches controlling the pH value to a range between 6-10 (col.4, lines 19-23). Further Coates teaches that pH values depends on the type of contaminate treated (col.18, lines 55-65). Some contaminates are better removed at higher pH while others at lower pH values. See MPEP 2112 regarding the benefit of increasing the efficiency of the chemical disinfectant by controlling the pH level. In addition, note that both the instant claims and Coate have the same pH range value (col.4, lines 20-22). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further adjust Holzhauer variable pH values to

pH values that falls between 6 to 10 as taught by Coate since such a range allows for optimum removal of contaminants (Coate, col.4, lines 18-20).

Coate fails to teach treating the chilling wastewater of a poultry plant. Caracciolo teaches the following: recovering a portion of the chiller water (figure 1:10), filtering organic solids (figure 1:13, 14 and 15) and returning the filtered water to the chiller (figure 1:19). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Holzhauer method by adding chilling water disinfection step as taught by Caracciolo in order to reduce the amount of fresh water added to the plant (Caracciolo, col.2, lines 7-9).

6. Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holzhauer et al (U.S.P.N. 5,472,619) in view of Hurst (U.S.P.N. 5,053,140).

Regarding claim 6, Holzhauer teaches a method for chemically disinfecting (for example, peracetic acid is a disinfectant utilized in the composition cited in col.6, lines 60-67) wastewater generated by meat-packing plants (col.1, lines 5-10) that includes adding a chemical disinfectant (col.6, lines 58-67), controlling the pH of the wastewater (col.6, lines 60-62) and treating wastewater from various operations in the plant (col.5, lines 19-21). As to the limitation that the controlled pH level results in optimizing the chemical disinfectant, see MPEP 2112, II. Holzhauer fails to explicitly teach chemically disinfecting wastewater generated by poultry plants. Hurst teaches disinfecting chilling water in poultry plant (col.1, lines 7-14 and col.5, lines 38-42) where the steps of scalding, picking, eviscerating, washing and rinsing are inherent steps of such process. Thus, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to further modify Holzhauer method to disinfect all wastewaters generated at various processing steps in a poultry plant in order to greatly reduce the volume of makeup fresh water to the process as taught by Hurst resulting in reduction in operating costs (col.2, lines 30-34).

Regarding claims 7 and 9-10, Holzhauer teaches the following: a method for disinfecting wastewater generated by meat-packing plants (col.1, lines 5-10), controlling the pH of the wastewater (col.6, lines 60-62) and treating wastewater from various operations in the plant (col.5, lines 19-21). Holzhauer fails to explicitly teach disinfecting wastewater generated by poultry plants, use of the chlorine or ozone and monitoring and regulating the addition of the disinfectant. Hurst teaches the following: disinfecting wastewater generated by chilling chicken carcasses (col.6, lines 30-40) where the step of eviscerating is an inherent step of such process, use of the chlorine or ozone (figure 1:10 and 7) and monitoring and regulating the addition of the disinfectant (col.7, lines 18-33). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Holzhauer method to disinfect all wastewaters generated at various processing steps in a poultry plant including the eviscerating step in order to greatly reduce the volume of makeup fresh water to the process as taught by Hurst resulting in reduction in operating costs (col.2, lines 30-34).

Regarding claim 8, Holzhauer teaches to initially add the disinfectant then to control the pH level (col.6, lines 58-61).

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holzhauer et al (U.S.P.N. 5,472,619) in view of Hurst (U.S.P.N. 5,053,140) as applied to claim 16 and further in view of Coate et al (U.S.P.N. 5,679,257).

Both Holzhauer and Hurst teach that pH should be controlled to a certain values in order to improve the efficiency of disinfection; yet, both fail to disclose an explicit pH level between 6 and 8. Coate teaches controlling the pH to a value of 6 (col.4, lines 20-25) and in col.18, lines 55-65, Coates teaches that pH values depends on the type of contaminate treated. Some contaminates are better removed at higher pH while others at lower pH values. Based on this teaching, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Holzhauer method by choosing a pH value between 6 and 8 since at such a range optimum removal of contaminants is achieved as taught by Coate (col.18, lines 58-61).

8. Claims 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caracciolo (U.S.P.N. 4,827,727) in view of Coate et al (U.S.P.N. 5,679,257).

Regarding claim 12, Caracciolo teaches a method (col.1, lines 4-9) for sterilizing poultry with ozonated water in a chiller (figure 1:1) that includes the following: recovering a portion of the chiller water (figure 1:10), adding a disinfectant to the chiller water (figure 1:3 and 18), monitoring and regulating the step of disinfectant addition (col.2, lines 37-48), filtering organic solids (figure 1:13, 14 and 15) and returning the filtered water to the chiller (figure 1:19). Caracciolo fails to teach employing pH controlling/adjustment steps. Coate discloses a method for chemically disinfecting bodies of wastewater by ozone that includes controlling and adjusting the pH level of

the aqueous system to a specific value (for example, see col.14, lines 43-45). Coate teaches that adjusting pH results in generating solids (col.8, lines 18-22). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Caracciolo method by adding pH adjustment step as taught by Coate since when pH is maintained within a certain range, optimum removal of contaminants in fluids is accomplished (Coate, col.4, lines 18-23).

Regarding claim 15, Caracciolo fails to teach maintaining pH level in the chiller water between 6 and 8. Coate teaches controlling the pH to a value of 6 (col.4, lines 20-25) and in col.18, lines 55-65, Coates teaches that pH values depends on the type of contaminate treated. Some contaminates are better removed at higher pH while others at lower pH values. Based on this teaching, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Caracciolo method by choosing a pH value between 6 and 8 since at such a range optimum removal of contaminants is achieved as taught by Coate (col.18, lines 58-61).

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Caracciolo (U.S.P.N. 4,827,727) in view of Coate et al (U.S.P.N. 5,679,257) as applied to claim 12 and further in view of Hibbard et al (U.S.P.N. 5,514,282).

Caracciolo teaches a method (col.1, lines 4-9) for sterilizing poultry with ozonated water in a chiller (figure 1:1) that includes screening the recovered water (figure 1:12) and fine filtering the recovered water (figure 1:15). However, both Caracciolo and Coate fail to teach floating the recovered water in a floatation unit. Hibbard teaches the use of a floatation unit (figure: 12). Thus, it would have been obvious to one of ordinary skill in

the art at the time the invention was made to further modify Caracciolo method by including a floatation unit as taught by Hibbard since the use of such a unit has unexpectedly been found to effect a high removal of phosphorous from the wastewater feed stream (col.4, lines 43-45).

10. Claims 16-17, 21 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holzhauer et al (U.S.P.N. 5,472,619) in view of Mostoller (U.S.P.N. 5,882,253).

Regarding claims 16 and 21, Holzhauer teaches a method for disinfecting wastewater generated by meat-packing plants (col.1, lines 5-10) that includes adding a disinfectant (col.6, lines 58-60) to a recovered process water (col.5, lines 19-21), controlling the pH of the wastewater (col.6, lines 60-62), reintroducing the treated process water (col.4, lines 31-32) and treating wastewater from various operations in the plant (col.5, lines 19-21). Holzhauer fails to explicitly teach disinfecting wastewater generated by poultry plants. Mostoller teaches that the steps of slaughtering, scalding, defeathering, eviscerating and the like are known in the art of processing chicken (col.4, lines 20-23). As a result, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Holzhauer method to disinfect all wastewaters generated at various processing steps in a poultry plant including heated water used in, for example, scalding step, as taught by Mostoller in order to minimize the risk of pathogen contamination to humans (Mostoller, col.1, lines 5-10).

Regarding claims 17 and 26, Holzhauer fails to teach processing poultry. Mostoller teaches that the step of scalding is known in the art of processing chicken

(col.4, lines 20-23) and recognizes that the eviscerating step causes serious contamination problem in a continuous on-line poultry processing plant (col.1, lines 5-13 and col.2, lines 34-49). Clearly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Holzhauer method to disinfect all wastewaters generated at various processing steps in a poultry plant, specifically the eviscerating and scalding steps, as taught by Mostoller in order to minimize the risk of pathogen contamination to humans (Mostoller, col.1, lines 5-10).

11. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holzhauer et al (U.S.P.N. 5,472,619) in view of Mostoller (U.S.P.N. 5,882,253) as applied to claim16 and further in view of Hurst (U.S.P.N. 5,053,140).

Regarding claims 18-20, Holzhauer and Mostoller fail to teach the use ozone and chlorine in treating recovered water in a poultry processing plant. Hurst teaches injecting ozone and chlorine (figure 1:10 and 7) into recovered water from the chiller step (col.5, lines 38-40) in a poultry processing plant. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Holzhauer method by additionally including ozone and chlorine since ozone oxidizes oxidizable material in the wastewater and kills microorganisms therein (Hurst, col.6, lines 60-61) and chlorine provides a furthering assuring disinfecting step in case the wastewater is heavily contaminated (Hurst, col.4, lines 40-43).

12. Claims 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caracciolo (U.S.P.N. 4,827,727) in view of Holzhauer et al (U.S.P.N. 5,472,619).

Regarding claim 22, Caracciolo teaches a method (col.1, lines 4-9) for sterilizing poultry with ozonated water in a chiller (figure 1:1) that includes the following: recovering a portion of the chiller water (figure 1:10), filtering organic solids (figure 1:13, 14 and 15) and returning the filtered water to the chiller (figure 1:19). Caracciolo fails to teach controlling the pH of the disinfected filtered water. Holzhauer teaches controlling the pH level of the wastewater (col.6, lines 60-62). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Caracciolo method by including a pH level controlling step as taught by Holzhauer in order to enhance kill rates of microorganisms in wastewaters (Holzhauer, col.4, lines 35-42).

Regarding claims 23-25, Caracciolo uses multiple filtering steps (figure: 13, 14 and 15) that necessarily results in reducing the chemical oxidation demand, which leads to improving the efficacy of the disinfectant, and the filterable organics are fat and other bulky carcass debris (col.3, lines 16-18).

Remarks

13. The terminal disclaimer submitted on 02/22/2007 has been accepted.

Response to Argument

14. Applicant's arguments filed on 02/22/2007 have been fully considered but they are not persuasive.

On pages 9-22 of the Remarks section, Applicant argues that Coate does not teach adding chemicals, that Coate does not teach optimizing the effectiveness of disinfection by pH adjustment, that Hurst fails to recognize optimizing the effectiveness

of disinfection by pH adjustment, that Caracciolo fails to teach adjusting the pH of wastewater to optimize the effectiveness of a chemical disinfectant, that Holzhauer does not teach adjusting the pH of an aqueous medium to increase the effectiveness of a chemical disinfectant, that none of Caracciolo, Coate or Hibbard teach filtering organic solids from recovered poultry chiller water where a portion of the solids is due to pH adjustment step that results in the precipitation of soluble material

Coate does add disinfectant to the wastewater by injecting ozone (col.4, lines 44-48) and does teach adjusting the pH to a value between 6-10 (col.4, lines 19-25). As to the limitation of optimizing the effectiveness of disinfection by pH adjustment, see MPEP 2112, II. In addition, Coates filters process water after pH adjustment step (col.15, lines 3-8). The mentioned limitation is an inherent feature in Coates and Hurst is applied to show the use of chlorine dioxide in disinfecting poultry processed water while Caracciolo is applied to show disinfecting recirculated chilling water with ozone of poultry process water is known. Furthermore, Holzhauer does add peracetic acid or acetic acid or hydrogen peroxide in a composition for adjusting the pH as shown in col.6, lines 60-67 and col.7, lines 1-2. As to the limitation of optimizing the effectiveness of disinfection by pH adjustment, see MPEP 2112, II.

Upon further evaluation of Hurst, it is noted that in col.3, lines 26-46, that the effectiveness of ozone to disinfect depends on residence time, which also depends on temperature and pH. One of ordinary skill in the art upon reading this teaching would recognize that depending on the degree of contamination of process water, residence time variable is to be modified depending on the situation at hand. This necessarily

requires changing temperature and pH values. Clearly, modifying the pH is a matter of routine experimentation based on Hurst teachings.

Upon further evaluation of Holzhauer, it is noted that in col.4, lines 33-41, that a pH control step is chemical treatment of process water that accomplishes various goals. For example, pH control is employed to enhance kill rates. Holzhauer provides an illustrative utilization of pH control in example 1 by having pH adjusted to 8. One of ordinary skill in the art upon reading this teaching would understand that depending of the type of utilization of pH control treatment step, pH value does change and is not limited to 8 as shown in the illustrative application of example 1. Clearly, changing the pH to meet the goals of each different application is a matter of routine experimentation based on Holzhauer teachings.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

16. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MONZER R. CHORBAJI whose telephone number is (571) 272-1271. The examiner can normally be reached on M-F 9:00-5:30.

18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, GLADYS J. CORCORAN can be reached on (571) 272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

19. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MRC

GLADYS JP CORCORAN
SUPERVISORY PATENT EXAMINER